Notice of Allowability	Application No.	Applicant(s)	
	09/927,741	REID ET AL.	
	Examiner	Art Unit	
	Wesley A. Nicolas	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *amendment submitted 5/19/04*.

2. ☒ The allowed claim(s) is/are *1-26 and 29-47*.

3. ☒ The drawings filed on *10 August 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

 * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

This is in response to the Amendment submitted May 19, 2004. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-26 and 29-47 are currently pending in this application.

Claim Rejections - 35 USC § 102

1. The 35 U.S.C. § 102 rejections with respect to claims 24-27, 29, 32-34, 37, and 39-40 have been **withdrawn** in view of Applicant's amendment to claim 24 set forth in the paper submitted May 19, 2004.

Claim Rejections - 35 USC § 103

2. The 35 U.S.C. § 103 rejections with respect to claims 30-31, 35-36, and 38 have been **withdrawn** in view of Applicant's amendment to claim 24 set forth in the paper submitted May 19, 2004.

Examiner's Amendment

3. It appears that the bottom of pages 6 and 7 of Applicant's response submitted May 19, 2004 were cut off by the PTO scanning system and as such, claims 42 and 47 appear to be incomplete. To ensure that there are no errors in the record, Examiner is repeating claims 42 and 47 below by Examiner's amendment as they were presented in the paper submitted by Applicant on January 7, 2004.

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

5. The application has been amended as follows:

Claim 42 should read:

-- 42. (Previously Presented) An apparatus for engaging a work piece during plating, the apparatus comprising:

a cup having a circumferential side wall defining an interior region and a lip within the interior region arranged such that lip can support the work piece in a first plane while the work piece remains within the interior region;

a field shaping element shaped and sized to affect an electric field shape impinging on the work piece during plating, the field shaping element defining a snorkel-shaped flow path between the field-shaping element and the cup, forming a passage for plating fluid to flow from inside the apparatus to outside the apparatus, said snorkel-shaped flow path having an inlet on the inside of the apparatus proximate the cup's lip and an outlet on the outside of the apparatus and positioned such that the outlet is at a higher elevation than the inlet when the apparatus oriented for use with the cup above the field shaping element; and

a cone having a work piece contact surface that fits within the cup's interior and configured to contact the work piece in a manner that holds the work piece in a fixed position against the cup's lip.--

Claim 47 should read:

-- 47. (Previously Presented) The apparatus of claim 45, wherein the offset is between about 25 degrees to 50 degrees.--

Allowable Subject Matter

6. Claims 1-26 and 29-47 are allowed over the prior art of record.

7. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the specific apparatus for engaging a work piece during plating which includes, *inter alia*, a cup arranged to support the workpiece and a field shaping element designed for connection with the cup were not taught by the prior art of record. The closest prior art of Hanson et al. fails to specifically teach a field shaping element designed for connection with the cup where the cup is arranged to support the workpiece. In addition, Applicant's reasons for allowance set forth in the paper submitted January 7, 2004 on pages 8-10 are further deemed sufficient and are incorporated herein.

Regarding claim 24, the specific step of immersing the work piece in the plating fluid prior to plating, wherein the workpiece has a substantially flat plating surface and wherein the holding step comprises holding the substantially flat plating surface in an

orientation that is not parallel to the plane defined by the plating fluid surface was not taught or suggested by the prior art of record.

Regarding claim 41, the specific apparatus for engaging a workpiece during plating which includes a cup defining an interior region and a lip within the interior region arranged such that the lip can support the workpiece in a first plane wherein the cup has a first surface and at least a portion of the first surface being curved and substantially non-parallel to the first plane was not taught or suggested by the prior art of record. In addition, Applicant's reasons for allowance set forth in the paper submitted January 7, 2004 on pages 8-10 are further deemed sufficient and are incorporated herein.

Regarding claim 42, the specific apparatus for engaging a workpiece during plating which includes a field shaping element defining a snorkel-shaped flow path between the field shaping element and the cup was not taught or suggested by the prior art of record. In addition, Applicant's reasons for allowance set forth in the paper submitted January 7, 2004 on pages 11-12 are further deemed sufficient and are incorporated herein.

Regarding claim 43, the specific apparatus for engaging a workpiece during plating which includes a cup with a lip that can support a workpiece wherein the cup has a plurality of flow holes defining a plurality of flow paths for plating fluid to flow from the inside of the apparatus to outside the apparatus was not taught or suggested by the prior art of record. In addition, Applicant's reasons for allowance set forth in the paper submitted January 7, 2004 on pages 12-13 are further deemed sufficient and are incorporated herein.

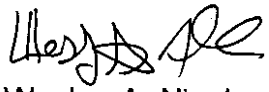
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley Nicolas whose telephone number is (571) 272-1247. The examiner can normally be reached on Mon.-Thurs. from 7 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached at (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov . Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Wesley A. Nicolas
Primary Examiner

May 28, 2004